September 27, 2000

4WD-FFB

MEMORANDUM

SUBJECT: Evaluation of Homestead Air Reserve Station's status under the RCRIS Corrective
Action Environmental Indicator Event Codes (CA725 and CA750)
EPA I.D. Number: FL7570024037

FROM: Doyle Brittain
Senior Remedial Project Manager

THRU: Harold Taylor, Acting Chief
Department of Defense Remedial Section

TO: Jon D. Johnston, Chief
Federal Facilities Branch

I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of Homestead Air Reserve Station's (HARS) status in relation to the following corrective action event codes defined in the Resource Conservation and Recovery Information System (RCRIS):

1) Current Human Exposures Under Control (CA725),

2) Migration of Contaminated Groundwater Under Control (CA750).

Concurrence by the Federal Facilities Branch Chief is required prior to entering these event codes into RCRIS. Your concurrence with the interpretations provided in the following paragraphs and the subsequent recommendations is satisfied by dating and signing at the appropriate location within Attachments 1 and 2.

II. HISTORY OF ENVIRONMENTAL INDICATOR EVALUATIONS AT THE FACILITY AND REFERENCE DOCUMENTS

This particular evaluation is the first evaluation for HARS. This evaluation is based on observations, interpretations, and conclusions concerning contamination, exposure, and contaminant migration at the facility.

III. FACILITY SUMMARY

The former Homestead Air Force Base (HAFB) consisted of approximately 2,940 acres of land in southern Miami-Dade County Florida approximately 5 miles east of downtown

Homestead and approximately 20 miles south off downtown Miami, Florida. In 1992 Hurricane Andrew hit HAFB leaving 97 percent of the Base facilities dysfunctional. As a result, HAFB was recommended for realignment by the 1993 Defense Base Closure and Realignment Commission as the HARS. As of April 1994 HARS occupied approximately 30 percent of the former HAFB and uses this cantonment area to maintain aircraft operations, perform maintenance, and operate repair facilities. The former HAFB was placed on the National Priorities List on August 30, 1990 and included all of the ten active OUs and one active oil contamination area which have not been closed. These sites, which are located within the containment area presently managed by the Air Force Reserve Command, are:

- OU-1 -former Fire Training Area No,. 2,
- OU-2 -former Pesticide Disposal Area
- OU-4 - Motor Pool, Building 312,
- OU-5 - former Electroplating Waste Area, Building 164,
- OU-7 - former Entomology Storage Area
- OU-12 - former Entomology Shop,
- OU-15 - old Hazardous Materials Storage Building 153,
- OU-19 - former AGE Shop Building 208,
- OU-25 - Hush House Building 814,
- OU-27 -former Test Cell Area, and
- SS-2A - Bulk POL Area.

The area surrounding HARS to the north and east consists of areas of the former HAFB which is or has been subject to transfer, lease, or sale. The areas to the south and west of HARS consists of agricultural land and undeveloped rural land.

IV. CONCLUSION FOR CA725
(Brief Outline of Issues Leading to an EI)

Most of the contaminated soil at these sites has been removed. These removals were to concentrations that were below risk based levels for the industrial scenario. In a few cases, the soil was removed to concentrations that were below risk based levels for the residential scenario. In the few cases where contaminated soils were not removed to risk based levels, the remaining contaminated soil is beneath building foundation concrete slabs or beneath the asphalt of paved parking lots eliminating the chance of human contact with these soils.

Human exposure to contaminated groundwater should not be a factor since there are no groundwater extraction wells at HAFB and land use restrictions will prevent the installation of any.

The sites have been approved by the regulatory community for no further action or for no further investigation with land use controls and/or long term monitoring.

V. CONCLUSION FOR CA750
(Brief Outline of Issues Leading to an EI of YE)

There is very little groundwater movement because of the insignificant gradient which averages 0.001 ft/ft. The direction of groundwater flow varies and is usually controlled by the difference in elevation between the groundwater surface and the elevation of the surface water in the canals which are abundant in the area. If migration does occur, this migration will be detected in monitoring wells which are part of long term monitoring programs.

VI. SUMMARY OF FOLLOW-UP ACTIONS

Continue the application of land use controls and requirement for periodic groundwater monitoring, at least until the five year review has been conducted.

VII. LEVEL OF CONFIDENCE IN REACHING A POSITIVE EI EVALUATION AND MAJOR ISSUES

Based on the large number of investigations that have been conducted at the contamination sites and the amount of remediation that has occurred, the level of confidence is high that the correct environmental indicator determination has been made.

Attachments: 1. CA725: Current Human Exposures Under Control
2. CA750: Migration of Contaminated Groundwater Under Control

ATTACHMENT 1
DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS Code (CA725)
Current Human Exposures Under Control

Facility Name: **Homestead Air reserve Station**
Facility Address: **29050 Coral Sea Blvd., Bos 68, Homestead ARS, Florida, 33039**
Facility EPA ID #: **FL7570024037**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   X If yes - check here and continue with #2 below,

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"** above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

Media	Yes	No	?	Rationale/Key Contaminants
Groundwater		X		
Air (indoors)		N/A		
Surface Soil (e.g., <2 ft)		X		
Surface Water		X		
Sediment		X		
Subsurface Soil (e.g., >2 ft)		X		
Air (outdoors)		NA		

1 "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

2 Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in

structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

__X__ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

__X__ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **Homestead Air reserve Station** facility, EPA ID # **FL7570024037**, located at **Homestead, Florida** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

The soil at HARS consists of a thin veneer of mostly organic soil and that which has weathered from the underlying limestone. This soil is underlain by a soft and porous oolite limestone. In many areas, the oolite is exposed. At all of the sites under consideration, most of the contaminated soil, and in many cases, some of the soft oolite, has been removed. These removals were to concentrations which were below risk based levels for the industrial scenario, and in a few cases, to levels which were below risk based levels which were below the industrial scenario. In the few cases where contaminated soil was not removed to risk based standards, the remaining contaminated soil is beneath building foundation slabs or under the asphalt pavement of parking lots. Under these two situations, there will be no chance of human exposure. In the event that construction workers might be exposed to contaminated soil or groundwater during excavation activities, any of this work will be performed according to appropriate health and safety plans.

Human exposure to contaminated groundwater should not be a factor since there are no groundwater extraction wells at HARS and land use controls prohibit the installation of any. In addition, the groundwater beneath HARS is saline, further discouraging its use.

All of the sites have been cleared for no further action or for no further investigation with land use controls and/or long term monitoring

Completed by (signature)_____ Date _____
(print)_____
(title)_____

Supervisor (signature)_____ Date _____
(print)_____
(title)_____
(EPA Region or State)_____

Contact telephone and e-mail numbers

(name)_____
(phone #)_____
(e-mail)_____

ATTACHMENT 2
DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS Event Code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name: **Homestead Air reserve Station**
Facility Address: **29050 Coral Sea Blvd., Bos 68, Homestead ARS, Florida, 33039**
Facility EPA ID #: **FL7570024037**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   X If yes - check here and continue with #2 below,

2. Is **groundwater** known or reasonably suspected to be **"contaminated"** above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

   X If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

   X YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the **Homestead Air Reserve Station** facility , EPA ID # **FL757002037**, located at **Homestead, Florida**. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Some pockets of contaminated groundwater remain beneath HARS. However, it is unlikely that this groundwater will migrate for the following reasons:

- There is very little groundwater movement because of the insignificant groundwater gradient which averages 0.001 ft/ft,
- The groundwater and the surface water in the base drainage canal system are nearly continuous of each other and there is a small amount of exchange between the two. The direction of groundwater flow is controlled by the elevation difference between the surface o the groundwater and the surface of the surface water in the canals
- Natural attenuation appears to be occurring for the organic contaminants,
- In some cases, over pumping groundwater monitoring wells in non-organic contaminant plumes has reduced contamination to acceptable levels.
- Salt water from Biscayne Bay has moved to the west-northwest until the salt water intrusion line bisects the base impeding groundwater in the opposite direction.

If any migration of contaminated groundwater does occur, it will be detected by the long-term groundwater monitoring program which is now in place. If migration does occur, it will be necessary to change the environmental indicator status for HARS.

Completed by (signature)_____ Date _____
(print)_____
(title)_____

Supervisor (signature)_____ Date_____
(print)_____
(title)_____
(EPA Region or State)_____

Contact telephone and e-mail numbers

(name)_____
(phone #)_____
(e-mail)_____